

**Remarks**

Favorable reconsideration in view of the herewith presented amendment and remarks is respectfully requested.

Claims 1-42 were pending in this application. Claims 1-42 are now cancelled in this amendment and new claims 43 to 65 are now pending.

Claims 4-36 are objected as being improper multiple dependent claims. Claims 4-36 has been cancelled. This objection should now be considered moot.

The abstract is attached and presented on a separate sheet of paper attached hereto.

Claims 1-3 are rejected under 35 U.S.C. §112, second paragraph as allegedly being indefinite.

The amendments as presented herewith are believed to overcome the Examiner's formal objections. Reconsideration and withdrawal of these formal objections is requested.

Claims 1 and 3/1 have been rejected under 35 U.S.C. §102(b) as allegedly being anticipated by Beine. Claims 2 and 3/2 have been rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Beine further in view of Moulton. Applicant traverses both of these rejections.

First of all, the Examiner should note that the principal claim (now claim 43) has been restricted to a fastener element. The clear restriction to a fastener element can be seen not only from the introduction to the claim 43 but also from the last requirement of the claim which requires the fastener element to comprise one of a threaded shaft protruding from said second axial end in a direction away from said cylindrical rivet section and a threaded bore extending within said first axial end and having a maximum thread diameter smaller than said internal

diameter of said cylindrical rivet section. This means that the fastener element must be either a male bolt element or a female nut element.

This restriction provides a first distinction over the Moulton patent (US Pat. 5,365,654) which is concerned solely with a rivet element and indeed a rivet element with flanges at both ends of the element and at the outer sides of the two or more components joined by the rivet, as can be seen from col. 3, lines 56 to 61 of the Moulton patent. It is of course a typical function of a rivet that it is used for the permanent joining of two or more components, whereas the fastener element of the present invention is first riveted permanently to one component and the thread portion is then used for the releasable attachment of a further component using either a nut or bolt passing through the further component and engaging the threaded shaft or bore of the claimed fastener element. The reference in claim 43 to the absence of a ring flange at the larger diameter end of the conical region in turn represents a further significant difference between the present element and the element of the Moulton patent.

Not only is claim 43 clearly distinguished over the Moulton patent it is also clearly distinguished over the Beine patent.

Beine is concerned with an anchor channel for use in the construction industry (Abstract, first sentence). In fact, the channel shown has two anchor bolts extending from it at spaced apart intervals. Applicant believes this anchor channel component to be one which is embedded in a concrete construction with the threaded end of the anchor bolts protruding from the concrete to enable a significant load bearing component to be bolted to the concrete surface. In such a construction, concrete will surround the anchor channel and the portions 7, 8 and 9 of the anchor bolts and will thus prevent any subsequent tendency for the embossed regions 13' of the anchor channel to expand when tensile loads are applied to the anchor bolts by tightening nuts such as

M in Fig. 2 applied to the threaded portions 10, 11 of the shank. For a mechanical construction other than one with solid material surrounding the embossed portion 13' and preventing it dilating under load the construction would be unstable. There would be the significant danger that the tensile load would widen, i.e. dilate the conical wall region 13' of the anchor channel resulting in the conical region of the head of the anchor bolt moving further into the widened conical region thus reducing the stretch in the anchor bolt (the stretch necessary to achieve the desired clamping load) so that the clamping load reduces and the connection becomes unstable. This would be a serious problem if the anchor channel concept were to be used in any other way than that for which it is intended.

In this connection the Examiner's attention should be drawn to the requirement in the present claims for the threaded shaft to protrude from said second axial end in a direction away from said cylindrical rivet section. This design, which is entirely different from that of the Beine patent, results in a tensile load applied to the threaded shaft tending to compress the conical wall region of the sheet metal part into contact with the conical region of the fastener element which prevents further movement of the sheet metal part and preserves the clamping load applied to the bolt. It also makes the connection more rigid and highly resistant to fluctuating loads, such as typically occur when the fastener element is used in automotive applications (a prime field of use for the fastener elements of the present invention).

This is thus a first major distinction over the Beine patent. A further major distinction lies in the requirement for a hollow cylindrical rivet section which is simply not present or suggested in the Beine patent, but is essential in the present invention to allow material of the fastener element to be deformed radially outwardly over the rim of the free end of the conical recess formed in the sheet metal component, i.e. the rim of the aperture of the small end of the conical

recess so that it is engaged in a ring recess formed by the deformation of the cylindrical rivet section which firstly applies the compressive load to the conical recess in the sheet metal component and secondly prevents pull out of the fastener element.

The considerations explained above also apply to the alternative embodiment in which the fastener element has the alternative possibility of a threaded bore extending within said first axial end and having a maximum thread diameter smaller than said internal diameter of the cylindrical rivet section. This latter embodiment would be used with a bolt fastener introduced into the fastener element coming from the side of the first axial end and being screwed into the fastener element in the direction towards the second axial end.

Moreover, there is no motivation for a person skilled in the art to consider combining the teachings of the Moulton and Beine patents, since one relates to an anchor bolt and the other to a rivet. Furthermore, it is difficult to see how a person skilled in the art could make a combination of a device without a flange with one having a flange. In addition, even if the person skilled in the art were to consider combining the two designs, which applicant submits the artisan would not do, the artisan would not arrive at the present design. Even a combination of the two designs would not lead to the specific position of the threaded shaft as claimed. Neither document shows alternative of a threaded bore and neither document shows a generally cylindrical portion having a diameter no larger than the larger diameter end of the conical region of the fastener element.

Applicants respectfully request reconsideration and withdrawal of the Examiner's §102(b) and §103(a) rejections.

It is believed that all of the present claims are in condition for allowance. The Examiner is requested to reconsider and withdraw all of the rejections made in the Official Action. Early and favorable action by the Examiner is earnestly solicited.

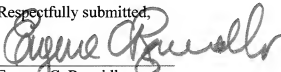
**AUTHORIZATION**

If the Examiner believes that issues may be resolved by telephone interview, the Examiner is respectfully urged to telephone the undersigned at (212) 309-1214. The undersigned may also be contacted by e-mail at gcr@hunton.com.

No additional fee is believed to be necessary. The Commissioner is hereby authorized to charge any additional fees which may be required for this amendment, or credit any overpayment to Deposit Account No. 50-2536.

In the event that an extension of time is required, or which may be required in addition to that requested in a petition for an extension of time, the Commissioner is requested to grant a petition for that extension of time which is required to make this response timely and is hereby authorized to charge any fee for such an extension of time or credit any overpayment for an extension of time to Deposit Account No. 50-2536.

Dated: September 27, 2006

Respectfully submitted,  
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